

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10757,356
Source: IFWO
Date Processed by STIC: 10-18-04

ENTERED



IFWO

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/757,356

DATE: 10/18/2004

TIME: 10:04:57

Input Set : D:\Seqlist.txt
 Output Set: N:\CRF4\10182004\J757356.raw

(P5.6)

4 <110> APPLICANT: Labas, Yulii Aleksandrovich
 5 Gurskaya, Nadezda Georgievna
 6 Yanushevich, Yuriy
 7 Fradkov, Arcady Fedorovich
 8 Lukyanov, Konstantin
 9 Lukyanov, Sergey
 10 Matz, Mikhail Vladimirovich
 12 <120> TITLE OF INVENTION: NOVEL CHROMOPHORES/FLUOROPHORES AND
 13 METHODS FOR USING THE SAME
 16 <130> FILE REFERENCE: CLON-090
 18 <140> CURRENT APPLICATION NUMBER: 10/757,356
 19 <141> CURRENT FILING DATE: 2004-01-13
 21 <150> PRIOR APPLICATION NUMBER: 60/332,980
 22 <151> PRIOR FILING DATE: 2001-11-13
 24 <150> PRIOR APPLICATION NUMBER: PCT/US02/36499
 25 <151> PRIOR FILING DATE: 2002-11-12
 27 <160> NUMBER OF SEQ ID NOS: 28
 29 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 31 <210> SEQ ID NO: 1
 32 <211> LENGTH: 868
 33 <212> TYPE: DNA
 34 <213> ORGANISM: Heteractis crispa
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 38 aaaatgtgtt cttacatcaa agaaaccatg caaagtaagg tttacatgga aggaaaagtt 120
 39 aacgaccaca acttcaagtg cactgcagaa ggaaaaaggag aaccatacaa aggctcacaa 180
 40 agcctgacga tcaccgtaaac tgaaggaggt cctctgccat ttgccttcga cattttca 240
 41 cacgcctttc gatatggcaa taaggtgttc gccaaagtacc ccaaagatca tcctgatttt 300
 42 tttaaggcagt ctcttcctga aggtttact tggaaaagag taagcaacta tgaggacgga 360
 43 ggagtcccta ccgttaaaca agaaaactagt ctggagggag attgcattat ttgcaaaatt 420
 44 aaagcacatg gcactaactt ccccgcatg ggtccggta tgcaaaaacg gaccaatgga 480
 45 tggagccat caactgaaac ggttattcca cgggggtggag gaattctgtat gcgcgtatgt 540
 46 cccgcactga agctgcttgg taacaaagga catcttctc gogtcatgga aacaacttac 600
 47 aagtcaaaaa aaaaaggtga acctgccaaa ccgcacttcc atcatttgag aatggagaag 660
 48 gatagtgtta gtgacgatga gaagaccatt gagcagcacg agaatgtgag ggcaagctac 720
 49 ttcaatgata gtggaaaatg atcatttcct tattgatttc aatgttaggg cattcagttt 780
 50 ccaaattttc tttagacacag tctttccct tagcttcgta gcctacttac ccatgtttt 840
 51 ttgaagtcaa taaatacgta agcactac 868
 53 <210> SEQ ID NO: 2
 54 <211> LENGTH: 225
 55 <212> TYPE: PRT
 56 <213> ORGANISM: Heteractis crispa
 58 <400> SEQUENCE: 2

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59 Met Cys Ser Tyr Ile Lys Glu Thr Met Gln Ser Lys Val Tyr Met Glu
 60 1 5 10 15
 61 Gly Lys Val Asn Asp His Asn Phe Lys Cys Thr Ala Glu Gly Lys Gly
 62 20 25 30
 63 Glu Pro Tyr Lys Gly Ser Gln Ser Leu Thr Ile Thr Val Thr Glu Gly
 64 35 40 45
 65 Gly Pro Leu Pro Phe Ala Phe Asp Ile Leu Ser His Ala Phe Arg Tyr
 66 50 55 60
 67 Gly Asn Lys Val Phe Ala Lys Tyr Pro Lys Asp His Pro Asp Phe Phe
 68 65 70 75 80
 69 Lys Gln Ser Leu Pro Glu Gly Phe Thr Trp Glu Arg Val Ser Asn Tyr
 70 85 90 95
 71 Glu Asp Gly Gly Val Leu Thr Val Lys Gln Glu Thr Ser Leu Glu Gly
 72 100 105 110
 73 Asp Cys Ile Ile Cys Lys Ile Lys Ala His Gly Thr Asn Phe Pro Ala
 74 115 120 125
 75 Asp Gly Pro Val Met Gln Lys Arg Thr Asn Gly Trp Glu Pro Ser Thr
 76 130 135 140
 77 Glu Thr Val Ile Pro Arg Gly Gly Ile Leu Met Arg Asp Val Pro
 78 145 150 155 160
 79 Ala Leu Lys Leu Leu Gly Asn Lys Gly His Leu Leu Cys Val Met Glu
 80 165 170 175
 81 Thr Thr Tyr Lys Ser Lys Lys Gly Glu Pro Ala Lys Pro His Phe
 82 180 185 190
 83 His His Leu Arg Met Glu Lys Asp Ser Val Ser Asp Asp Glu Lys Thr
 84 195 200 205
 85 Ile Glu Gln His Glu Asn Val Arg Ala Ser Tyr Phe Asn Asp Ser Gly
 86 210 215 220
 87 Lys
 88 225
 91 <210> SEQ ID NO: 3
 92 <211> LENGTH: 845
 93 <212> TYPE: DNA
 94 <213> ORGANISM: Dendronephthya sp
 96 <400> SEQUENCE: 3
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 98 aaagaagata tgagggttaa ggtgcataatg gaagggatg taaaacggca tgctttgtg 120
 99 attgaagggg aaggaaaagg aaggccctac gaaggcacac agacctgaa cctgacagtg 180
 100 aaagaaggcg cgcctctccc attttcttac gacatcttga caacagcatt gcactacgga 240
 101 aacagagtat tcactgaata cccagcagat atcacggatt atttcaagca atcatttcct 300
 102 gaaggatatt cctggaaaag aaccatgact tatgaagaca agggcatttg taccatcaga 360
 103 agcgacataa gcttggaaagg tgactgctt ttccaaaaca ttctttttaa tggatgaac 420
 104 ttcccccaa atggtccagt tatgcagaag aaaacttga agtgggaacc atccacagag 480
 105 aagctgcacg tgcgtgatgg gttgcttgc ggtaatatta acatggctct gctgcttcaa 540
 106 ggaggtggac attacctgtg tgacttcaa actacttaca aagcgaagaa ggttggcag 600
 107 ttgccagatt atcatttgt gaccatcgc attgagatct tgagtaatga cagcgattac 660
 108 aacaaaagtga agctgtacga gcatggggtt gctcgctatt ctccgttgc caagttaggc 720
 109 ctggtagagg ttcaagggaa agccataatg actgcataga taaacatgtt gtgaagacca 780
 110 catactcgaa attagagttt agggatttgtt agttgtggta gattctagcc tacaatattt 840

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114 <211> LENGTH: 236
115 <212> TYPE: PRT
116 <213> ORGANISM: Dendronephthya sp
118 <400> SEQUENCE: 4
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120 1 5 10 15
121 Asn Val Asn Gly His Ala Phe Val Ile Glu Gly Glu Gly Lys Gly Arg
122 20 25 30
123 Pro Tyr Glu Gly Thr Gln Thr Leu Asn Leu Thr Val Lys Glu Gly Ala
124 35 40 45
125 Pro Leu Pro Phe Ser Tyr Asp Ile Leu Thr Thr Ala Leu His Tyr Gly
126 50 55 60
127 Asn Arg Val Phe Thr Glu Tyr Pro Ala Asp Ile Thr Asp Tyr Phe Lys
128 65 70 75 80
129 Gln Ser Phe Pro Glu Gly Tyr Ser Trp Glu Arg Thr Met Thr Tyr Glu
130 85 90 95
131 Asp Lys Gly Ile Cys Thr Ile Arg Ser Asp Ile Ser Leu Glu Gly Asp
132 100 105 110
133 Cys Phe Phe Gln Asn Ile Arg Phe Asn Gly Met Asn Phe Pro Pro Asn
134 115 120 125
135 Gly Pro Val Met Gln Lys Lys Thr Leu Lys Trp Glu Pro Ser Thr Glu
136 130 135 140
137 Lys Leu His Val Arg Asp Gly Leu Leu Val Gly Asn Ile Asn Met Ala
138 145 150 155 160
139 Leu Leu Leu Glu Gly Gly His Tyr Leu Cys Asp Phe Lys Thr Thr
140 165 170 175
141 Tyr Lys Ala Lys Lys Val Val Gln Leu Pro Asp Tyr His Phe Val Asp
142 180 185 190
143 His Arg Ile Glu Ile Leu Ser Asn Asp Ser Asp Tyr Asn Lys Val Lys
144 195 200 205
145 Leu Tyr Glu His Gly Val Ala Arg Tyr Ser Pro Leu Pro Lys Ser Gly
146 210 215 220
147 Leu Val Glu Val Gln Gly Lys Ala Ile Met Thr Ala
148 225 230 235
151 <210> SEQ ID NO: 5
152 <211> LENGTH: 851
153 <212> TYPE: DNA
154 <213> ORGANISM: Zoanthus sp
156 <400> SEQUENCE: 5
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158 atggccatt caaagcacgg actaacagat gacatgacaa tgcatttcg tatggaaggg 120
159 tgcgtcgatg gacataagg ttaatctgtg tggattgaa ggaggaccac tgccattctc cgaagacata 180
160 aaacagttt ttaatctgtg tggattgaa ggaggaccac tgccattctc cgaagacata 240
161 ttgtctgctg cgtttgcata cggaaacagg ctcttcactg aatatcctga aggcatagtt 300
162 gactatttca agaactcgtg tcctgctgga tatacgtggc acaggtctt tcgctttgaa 360
163 gatggagcag tttgcataatg cagtgcagat ataacagtaa atgttaggaa aaactgcatt 420
164 tatcatgagt ccacgttta tggagtgaac tttcctgctg atggacctgt gataaaaag 480

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166 ttaaaagggg atgtctccat gtacctcctt ctgaaggatg gtggcggtta ccgctgccag 600
167 tttgacacaa ttaccaaagc aaagactgag ccaaaaagaaa tgccggactg gcacttcatc 660
168 cagcataagc tcaaccgtga agaccgcagc gatgctaaga atcagaaatg gcaactgata 720
169 gaacatgcta ttgcattcccg atctgcttta ccctgataac aaaggagttg ctattgcatg 780
170 tgcattgccta ttacgctgat aaaaatgtag ttttaacatg caattgtatg tgcatgcaca 840
171 ttaccctgat a 851
173 <210> SEQ ID NO: 6
174 <211> LENGTH: 231
175 <212> TYPE: PRT
176 <213> ORGANISM: Zoanthus sp
178 <400> SEQUENCE: 6
179 Met Ala His Ser Lys His Gly Leu Thr Asp Asp Met Thr Met His Phe
180 1 5 10 15
181 Arg Met Glu Gly Cys Val Asp Gly His Lys Phe Val Ile Glu Gly Asn
182 20 25 30
183 Gly Asn Gly Asn Pro Phe Lys Gly Lys Gln Phe Ile Asn Leu Cys Val
184 35 40 45
185 Ile Glu Gly Pro Leu Pro Phe Ser Glu Asp Ile Leu Ser Ala Ala
186 50 55 60
187 Phe Asp Tyr Gly Asn Arg Leu Phe Thr Glu Tyr Pro Glu Gly Ile Val
188 65 70 75 80
189 Asp Tyr Phe Lys Asn Ser Cys Pro Ala Gly Tyr Thr Trp His Arg Ser
190 85 90 95
191 Phe Arg Phe Glu Asp Gly Ala Val Cys Ile Cys Ser Ala Asp Ile Thr
192 100 105 110
193 Val Asn Val Arg Glu Asn Cys Ile Tyr His Glu Ser Thr Phe Tyr Gly
194 115 120 125
195 Val Asn Phe Pro Ala Asp Gly Pro Val Met Lys Lys Met Thr Thr Asn
196 130 135 140
197 Trp Glu Pro Ser Cys Glu Lys Ile Ile Pro Ile Asn Ser Gln Lys Ile
198 145 150 155 160
199 Leu Lys Gly Asp Val Ser Met Tyr Leu Leu Lys Asp Gly Gly Arg
200 165 170 175
201 Tyr Arg Cys Gln Phe Asp Thr Ile Tyr Lys Ala Lys Thr Glu Pro Lys
202 180 185 190
203 Glu Met Pro Asp Trp His Phe Ile Gln His Lys Leu Asn Arg Glu Asp
204 195 200 205
205 Arg Ser Asp Ala Lys Asn Gln Lys Trp Gln Leu Ile Glu His Ala Ile
206 210 215 220
207 Ala Ser Arg Ser Ala Leu Pro
208 225 230
211 <210> SEQ ID NO: 7
212 <211> LENGTH: 1178
213 <212> TYPE: DNA
214 <213> ORGANISM: Scolymia cubensis
216 <400> SEQUENCE: 7
217 tgtgacattc agtcatatacg gaggccttat cggagctgag gtcccattca ccgttgtat 60
218 ttggacggga gcagatcgag aacaacmagg gctgtacgag tctgataatt tactttacat 120

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219 ctaccaacat gcagcgtgct gggatgaagg ttaaggaaca tatgaagatc aaactgcgt 180
 220 tgggaggtac tgtaaacgga aagcatttcg cggttaatgg gacaggagac ggctaccctt 240
 221 atcagggaaa acagattttg aaacttatcg tcgaaggcag cgaacctctg ccttcgctt 300
 222 tgatatatctt gtcagcagca ttccagtagt gcaacagggc attcaccgaa taccacaa 360
 223 agatagcaga ctattcaag cagtcgttg agtttgcga ggggttctcc tggAACGAA 420
 224 gtttactt cgaagatggg gccatttgcg tcgccaccaa cgatataacg atgggttgt 480
 225 gtgagttca gtatgatatt cgatttgatg gtctgaacct ccctgaagat ggtccagtga 540
 226 tgcaaaagaa aaccgtaaaa tgggagccat ccaactgagat aatgtatatg caaaatggag 600
 227 tgctgaaggg tgaggttaac atggctctgt tgcttcaaga caaaagccat taccgttgcg 660
 228 acctcaaaac tacttacaaa gctaagaata atgtgccgca tcctccaggc taccactatg 720
 229 tggatcactg cattgaaata ctcgaagaac gtaaggatca cgttaagctg cgggagcatg 780
 230 ctaaagctcg ttctagcctg tcacctacca gtgAAAAGA acgaaaggct taggtatag 840
 231 tcaaaaagac aacaagacga aaatgaaagg tgttcattgt tagaatttga tattttcgat 900
 232 tcaatgatc gttaaggat ttgcttagagg ctagctaaca ggttaacatc ataaggatag 960
 233 agattycgtt gcggagttag aaccttwata ttttccgaat tccamctaga gtcgttgaga 1020
 234 aatttatttag agactagctt tagagttact tttgtggaaa aaaaggttc catttttgc 1080
 235 gttattacag cattaaagc attaggaatag agattcgtt atggaaaata acagtaggaa 1140
 236 aatacgttgt gaaaataaac ttgttgcga aaaaaaaaaa 1178
 238 <210> SEQ ID NO: 8
 239 <211> LENGTH: 234
 240 <212> TYPE: PRT
 241 <213> ORGANISM: Scolymia cubensis
 243 <400> SEQUENCE: 8
 244 Met Gln Arg Ala Gly Met Lys Val Lys Glu His Met Lys Ile Lys Leu
 245 1 5 10 15
 246 Arg Met Gly Gly Thr Val Asn Gly Lys His Phe Ala Val Asn Gly Thr
 247 20 25 30
 248 Gly Asp Gly Tyr Pro Tyr Gln Gly Lys Gln Ile Leu Lys Leu Ile Val
 249 35 40 45
 250 Glu Gly Ser Glu Pro Leu Pro Phe Ala Phe Asp Ile Leu Ser Ala Ala
 251 50 55 60
 252 Phe Gln Tyr Gly Asn Arg Ala Phe Thr Glu Tyr Pro Thr Glu Ile Ala
 253 65 70 75 80
 254 Asp Tyr Phe Lys Gln Ser Phe Glu Phe Gly Glu Gly Phe Ser Trp Glu
 255 85 90 95
 256 Arg Ser Phe Thr Phe Glu Asp Gly Ala Ile Cys Val Ala Thr Asn Asp
 257 100 105 110
 258 Ile Thr Met Val Gly Gly Glu Phe Gln Tyr Asp Ile Arg Phe Asp Gly
 259 115 120 125
 260 Leu Asn Phe Pro Glu Asp Gly Pro Val Met Gln Lys Lys Thr Val Lys
 261 130 135 140
 262 Trp Glu Pro Ser Thr Glu Ile Met Tyr Met Gln Asn Gly Val Leu Lys
 263 145 150 155 160
 264 Gly Glu Val Asn Met Ala Leu Leu Leu Gln Asp Lys Ser His Tyr Arg
 265 165 170 175
 266 Cys Asp Leu Lys Thr Thr Tyr Lys Ala Lys Asn Asn Val Pro His Pro
 267 180 185 190
 268 Pro Gly Tyr His Tyr Val Asp His Cys Ile Glu Ile Leu Glu Glu Arg
 269 195 200 205

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/757,356

DATE: 10/18/2004
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Input Set : D:\Seqlist.txt
Output Set: N:\CRF4\10182004\J757356.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:28; Xaa Pos. 65,144

VERIFICATION SUMMARY

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Input Set : D:\Seqlist.txt

Output Set: N:\CRF4\10182004\J757356.raw

L:871 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:64
M:341 Repeated in SeqNo=28